

AMENDMENTS TO THE CLAIMS

Claim 1 (Previously Presented) An optical communication apparatus for transmitting an intermittent optical signal from a transmitting side to a receiving side by using wavelength information of the optical signal as an address, said apparatus comprising:

at least two optical transmitting circuits operable to send the intermittent optical signal;

at least two optical receiving circuits operable to receive the optical signal sent from each of said optical transmitting circuits, said at least two optical receiving circuits each being operable to receive a respective predetermined wavelength of the optical signal sent from each of said optical transmitting circuits; and

an optical transfer circuit having at least two output ports operable to connect each of said optical transmitting circuits to each of said optical receiving circuits; wherein:

each of said optical transmitting circuits is operable to intermittently send burst optical signals which are generated by varying the intermittent optical signal so as to prevent a collision among the generated burst optical signals due to a coincidence in wavelength or an overlap between time periods in which the burst optical signals are sent;

said optical transfer circuit is operable to multiplex the burst optical signals outputted from said optical transmitting circuits, to separate the multiplexed burst optical signal into optical signals for each predetermined wavelength corresponding to said optical receiving circuits, and to individually output the separated optical signals from said output ports; and

each of said optical receiving circuits is operable to convert the optical signal outputted from a corresponding one of said output ports into an electrical signal, and to intermittently output the electrical signal.

Claim 2 (Previously Presented) The optical communication apparatus according to claim 1, further comprising a wavelength traffic manager, wherein:

each of said optical transmitting circuits includes a variable wavelength optical modulator operable to convert the intermittent signal into the burst optical signal, to set a

wavelength of the burst signal to any one of at least two predetermined varying wavelengths corresponding to said optical receiving circuits, and to intermittently send the burst optical signal;

said wavelength traffic manager is operable to control the wavelengths of the burst optical signals sent from said variable wavelength optical modulators so as to prevent the wavelengths from coinciding with one another; and

said optical transfer circuit includes

an optical multiplexer operable to multiplex the burst optical signals outputted from said optical transmitting circuits and to output a multiplexed optical signal,

a wavelength separator operable to separate the multiplexed optical signal inputted from said optical multiplexer into optical signals of the predetermined wavelengths corresponding to said optical receiving circuits, and to individually output the separated optical signals from said output ports, and

each of said optical receiving circuits includes an optical receiver operable to convert the optical signal outputted from said output port corresponding thereto of said wavelength separator into the electrical signal, and to intermittently output the electrical signal.

Claims 3-11 (Cancelled)